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Report on the proposed study programme Applied Statistics

Statistical methods and applied statistics in Serbia recently increase their importance mainly as a consequence of two factors - one of them are universal globalisation processes, the other is the effort of the country to join European political and economic structures. As a result of both it is crucial for the country to by prepared for the competitive environment and to stress the compatibility of its economic, financial and research capacities.

From this point of view the effort of Serbian universities to establish specialized master studies in Applied Statistics is timely and adequate. I appreciate the fact that the program has been prepared in close cooperation of almost all national universities, what guarantees efficient use of human sources and supports potential mobility of students. The participation of the National Statistical Office will most probably serve as a tool to keep the program in line with practical needs. On the other hand, well balanced ratio of theoretical and applied subjects makes the program attractive and useful also for those students who intend to continue their carrier in the academic sector.

The program contains four modules: Economy, Engineering, Medicine and Social Sciences. However, particular lessons in these modules are realized only in the third semester of four semester study. This is an effective way how to offer a wide range of applications with relatively limited human sources, on the other hand it provides enough time for a student to decide about his/her narrow specialization.

The first year of the study provides an overview of methods used in various parts of applied statistics. The stress is on a deep understanding of the theoretical background in subjects Probability theory, Mathematical statistics, Sampling and Linear models. Most probably the major part of potential students will come from bachelor courses in mathematics, but thanks to the choice of optional subjects, containing a course of Calculus, this study program will be accessible also for bachelors graduated in various types of bachelor programs in economy. On the other hand the students with only theoretical background are offered a course of Elements of Economy as an optional subject.

Statistical software, that is very important in application, is covered by a specialized course in the first semester and its utilisation is an integral part in a large number of other subjects.

The second year of the study is devoted to the modules (the third semester), elective courses on Bayes statistics and Data analysis and neural networks, practical work of the students and preparation of master thesis.

However, a program of this type has to react to practical needs, while maintaining the depth and quality of its theoretical background. Therefore I recommend to create a system of feedback that would provide information on the experience of both students and their employers and their opinion on the structure of the program seen after a few years of practical work. Such system would also enable to identify the real needs of the labour market in this area.

My opinion is that the proposed program can provide well prepared specialist for a wide range of areas dealing with statistical analysis and in related fields. Therefore I strongly support its opening in the nearest possible time.

Done in Banská Bystrica, April 13, 2011.

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